

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property Organization
International Bureau**



A standard linear barcode is located at the bottom of the page, consisting of vertical black bars of varying widths on a white background.

(43) International Publication Date
31 May 2001 (31.05.2001)

PCT

(10) International Publication Number
WO 01/39483 A2

(51) International Patent Classification⁷: H04M 15/00

[FI/FI]; Kiskottankuja 4 D 49, FIN-02660 Espoo (FI).
MÄKELÄ, Tero [FI/FI]; Seljatie 1 A 14, FIN-00320
Helsinki (FI). **SJÖBLOM**, Kai [FI/FI]; Viherkalliontie 1
A 9, FIN-02710 Espoo (FI).

(22) International Filing Date:
22 November 2000 (22.11.2000)

(74) Agents: **SLINGSBY, Philip, Roy et al.**; Page White & Farrer, 54 Doughty Street, London WC1N 2LS (GB).

(25) Filing Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU.

(25) **Filing Language:** English (81) **Designated States (national):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UG, US, UZ, VN, YU, ZA, ZW

(26) **Publication Language:** English

(30) **Priority Data:**
9927597.6 22 November 1999 (22.11.1999) GB

(71) **Applicant (for all designated States except US): NOKIA NETWORKS OY [FI/FI]; Keilalahdentie 4, FIN-02150 Espoo (FI).**

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TI, TM), European

(72) Inventors; and
(75) Inventors/Applicants (*for US only*): HURTTA, Tuula

patent (AT, BE, CH, CT, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR). OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(54) Title: IMPROVING CHARGING EFFICIENCY

[Continued on next page]

WO 01/39483 A2

(57) Abstract: A method for performing charging in a telecommunications system, comprising: storing at a subscriber information store subscription information including charging arrangement information indicative of the charging arrangement for a first communication terminal operating in the telecommunications system; providing by means of packet data interface apparatus packet data communication services to the first terminal, the packet data interface apparatus being capable of interfacing between the first communication terminal and a packet-switched data link to another communications terminal; generating by means of the packet data interface apparatus charging messages indicative of the usage of the packet data communication services by the first terminal; transferring the charging messages to charging apparatus; and performing by means of the charging apparatus a charging operation to attribute to a subscriber for the first communications terminal a charge for use of the communication services by the first terminal; the method further including the steps of: transferring the charging arrangement information to the packet data interface apparatus; and storing at the packet data interface apparatus the charging arrangement information for the first communication terminal; and wherein the step of generating charging messages comprises generating the said charging messages dependant on the charging arrangement information for the first communication terminal.